ACRM
AMERICAN CONGRESS OF REHABILITATION MEDICINE

Archives of Physical Medicine and Rehabilitation

journal homepage: www.archives-pmr.org

Archives of Physical Medicine and Rehabilitation 2020;101:2053-5

ORGANIZATION NEWS

Highlights From the Rehabilitation Measures Database

This content is provided as a service by the American Congress of Rehabilitation Medicine and is not peer reviewed by the Archives.

Measurement Characteristics and Clinical Utility of the International Consultation on Incontinence Modular Questionnaire—Urinary Incontinence Short Form Among Females With Urinary Incontinence

Rebecca Parr, PT, DPT, OCS, Jennie M. Le, MS, MB(ASCP), CGMBS, Tina Schmidt-McNulty, MS, CES, RN, Stephanie A. Miller, PT, PhD, NCS, Linda Ehrlich-Jones, PhD, RN

Urinary incontinence (UI) is a common health issue that affects individuals of all ages and disproportionately affects females.[1] Symptoms alone are a poor indicator of the effect UI has on an individual's life.[1] The first International Consultation on Incontinence met in 1998 to create a universal questionnaire to assess the symptoms and effect of UI.[1] There are currently 19 modules within the International Consultation on Incontinence Modular Questionnaire, with 3 additional in development. The International Consultation on Incontinence Modular Questionnaire—Short Form for Urinary Incontinence (ICIQ-UI SF) is the first and most commonly used module. The ICIQ-UI SF is a 6-item patient-reported outcome measure designed to assess the level, effect, and perceived cause of incontinence on quality of life in adult populations. Items 1 and 2 are demographic questions, and item 6 asks about leakage-inducing activities; these items are unscored. Items 3, 4, and 5, which measure urinary frequency, amount, and interference with daily activities, are scored and summed to give a total score ranging from 0-21. The ICIQ-UI SF does not require training, and it can be administered for free using the evaluation form and a writing utensil. Additionally, this form has been cross-culturally validated in 63 different languages. The ICIQ-UI SF demonstrates excellent test-retest reliability,[2,3] convergent validity,[1,4] and concurrent validity[5,6] with similar instruments that assess UI.

This abbreviated summary provides a review of the psychometric properties of the International Consultation on Incontinence Modular Questionnaire-Urinary Incontinence Short Form (ICIQ-UI SF) in females with urinary incontinence. A full review of the ICIQ-UI SF and reviews of over 480 other instruments for patients with various health conditions can be found at: www.sralab.org/Rehabilitation-Measures.

Please address correspondence to rehabmeasures@sralab.org.

This instrument summary is designed to facilitate the selection of outcome measures by clinicians. The information contained in this summary represents a sample of the peer-reviewed research available at the time of this summary's publication. The information contained in this summary does not constitute an endorsement of this instrument for clinical practice. The views expressed are those of the summary authors and do not represent those of authors' employers, instrument owner(s), the *Archives of Physical Medicine and Rehabilitation*, the Rehabilitation Measures Database, or the United States Department of Health and Human Services. The information contained in this summary has not been reviewed externally.

The Rehabilitation Measures Database and Instrument Summary Tear-sheets were initially funded by the National Institute on Disability, Independent Living, and Rehabilitation Research, Administration for Community Living, United States Department of Health and Human Services, through the Rehabilitation Research and Training Center on Improving Measurement of Medical Rehabilitation Outcomes (H133B090024). Current funding for the Rehabilitation Measures Database comes from the Shirley Ryan AbilityLab, the first-ever "translational" research hospital where clinicians, scientists, innovators, and technologists work together in the same space, applying research in real time to physical medicine and rehabilitation.

BIBLIOGRAPHY

1. Avery K, Donovan J, Peters TJ, Shaw C, Gotoh M, Abrams P. ICIQ: a brief and robust measure for evaluating the symptoms and impact of urinary incontinence. Neurourol Urodyn 2004;23:322-330.
2. Lim R, Liong ML, Lau YK, Yuen KH. Validity, reliability, and responsiveness of the ICIQ-UI SF and ICIQ-LUTSqol in the Malaysian population. Neurourol Urodyn 2017;36:438-442.
3. Gotoh M, Homma Y, Funahashi Y, Matsukawa Y, Kato M. Psychometric validation of the Japanese version of the International Consultation on Incontinence Questionnaire-Short Form. Int J Urol 2009;16:303-306.
4. Nystrom E, Sjostrom M, Stenlund H, Samuelsson E. ICIQ symptom and quality of life instruments measure clinically relevant improvements in women with stress urinary incontinence. Neurourol Urodyn 2015;34:747-751.
5. Karantanis E, Fynes M, Moore KH, Stanton SL. Comparison of the ICIQ-SF and 24-hour pad test with other measures for evaluating the severity of urodynamic stress incontinence. Int Urogynecol J Pelvic Floor Dysfunct 2004;15:111-116 [discussion: 116].
6. Klovning A, Avery K, Sandvik H, Hunskaar S. Comparison of two questionnaires for assessing the severity of urinary incontinence: the ICIQ-UI SF versus the incontinence severity index. Neurourol Urodyn 2009;28:411-415.

Rehabilitation Measures

Measure Name:
International Consultation on Incontinence Modular Questionnaire –Urinary Incontinence Short Form

Summary Authors:
R Parr, JM Le, T Schmidt-McNulty, SA Miller, L Ehrlich-Jones

Populations Reviewed:
Women with Urinary Incontinence

Acronym:
ICIQ-SF

Purpose and Administration Instructions:
A 6-item subjective measure designed to assess the level, effect, and perceived cause of incontinence in adult populations.

Administration Time:
<5 minutes

Required Equipment:	Training Required:	Score:	Items:
None	None	Min:0 / Max:21	6

Validity:

Concurrent Validity:
- **Adequate** correlation (r=.46) with the 24-hour pad test[5]
- **Adequate** correlation with mean frequency of leakage episodes in urinary diary (Kendall's tau b=0.399, p =.002) [5]
- **Poor** correlation (P=.2) with Stamey grade[5]
- **Excellent** correlation (r=.62) with the Incontinence Severity Index[6]

Convergent Validity:
- **Adequate to Excellent** correlation (r=.72) with the King's Health Questionnaire[1]
- **Excellent** correlation (r=.74) with ICSmaleSF Incontinence score[1]
- **Excellent** correlation (r=0.6-0.84) with Bristol women Lower Urinary Tract Symptoms[1]
- **Adequate** correlation (t=.52) with the Patient Global Impression of Improvement[4]

Reliability:

Test-retest Reliability
- **Excellent** test-retest reliability in women (Total Score ICC=0.95) [2]
- **Excellent** test-retest reliability in women (Total Score ICC=0.91; Japanese version)[3]

Internal Consistency
- **Poor** internal consistency with women (Cronbach 's alpha 0.60)[2]
- Adequate Internal consistency for Japanese version with Cronbach's alpha = .78, Japanese version)[3]
- **Excellent** Internal consistency with Cronbach's alpha = .92[1]
- **Adequate** Internal consistency for Japanese version with Cronbach's alpha = .78, Japanese version)[3]

Scoring Information:

Items (questions) 1 and 2 are demographic questions (DOB and sex)
- Item (3, 4, and 5) scores are summed for the total score on the ICIQ-UI SF
- Scoring scale: 0-21, minimum 0, maximum 21. A higher score indicates greater impairment from incontinence.
- Item-level scores vary but range from 0-10. Item (question) 6 (self-perceived cause) is unscored.

Responsiveness:

Large effect sizes (>.8) were present for each individual item score as well as the total score[2]

Floor / Ceiling Effects:
- **Adequate** floor effect 0.8% to 4.1% (Japanese version)[3]
- **Adequate to poor** ceiling effect 7.5% to 23.1% (Japanese version)[3]

Cut-Off Scores:

Categories: Slight = 1 - 5, Moderate = 6 - 12, Severe = 13 - 18, and Very severe = 19 - 21[6]

Normative Data

Mean Total Score = 7.4(3.6)[6]; 10.2(3.17)[4]; 13(4)[5]
MDC = .58[4] MCID = 2.52 (2.56)[4]
Standard Error of Measurement = 0.21[4]

Abbreviations:

ICC: Intraclass correlation coefficient
MDC: Minimal detectable change
MCID: Minimal clinically important difference

Cut-off Criteria:

	r	ICC
Excellent	≥ .6	≥ .75
Adequate	.31-.59	.40 -.74
Poor	≤ .3	< .4

Considerations:

The International Consultation on Incontinence developed additional modules. They include: ICIQ-VS for vaginal symptoms, ICIQ-OAB for overactive bladder, ICIQ-UAB for underactive bladder, ICIQ-MLUTS for male lower urinary tract symptoms (LUTS), ICIQ-FLUTS for female LUTS, ICIQ-MLUTS-SEX or ICIQ-FLUTS-SEX for LUTS sex-specific sexual matters, and ICIQ-LUTSqol for LUTS related quality of life. Each short module of the ICIQ uses a 5-point Likert scale to assess the presence, severity and associated bother of symptoms.